

on page 10, lines 5-6 of the Specification and in original claim 16. Support for claim 28 may be found on page 13, lines 10-12 of the Specification. Support for claims 30 and 31 may be found on page 3, line 27 to page 4, line 2 of the Specification and in original claim 15. Claims 32 and 33 are based on original claims 7 and 8. Claims 34 and 35 are based on original claim 9 and page 2, lines 25-30 of the Specification. Claims 36 and 37 are based on original claims 12 and 13. Support for claim 38 may be found on page 9, lines 27-28 of the Specification. No new matter has been added.

2. Restriction Requirement

The Examiner has maintained the restriction requirement of September 21, 2000. Applicants elect to prosecute the claims of Group I, claims 1-16, and reserve the right to pursue the non-elected invention in a divisional application.

3. Specification

The Specification has been amended to include Applicant's claim to foreign priority under 35 USC §120.

4. Drawings

The Applicants request that the requirement for formal drawings be held in abeyance until the case is in condition for allowance.

5. Rejections Under 35 USC §112, second paragraph

The Examiner has rejected claims 7-8 and 10 under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 7-8 and 10 have been cancelled rendering the rejection moot. However, Applicants would like to point out that new claims 32 and 33, which correspond to original claims 7-8, provide proper antecedent support for the term "optical detector". Reconsideration and removal of the rejections is respectfully requested.

6. Rejections Under 35 USC §102(b) and 102(e)

The Examiner has rejected claims 1-5, 9-10 and 14 under 35 USC §102(b) as being anticipated by Sittampalam et al. (Current Opinion in Chemical Biology, 1997). The Examiner has rejected claims 1-2, 9-10 and 14 under 35 USC §102(e) as being anticipated by Isacoff et al. (US 5,756,351) and has rejected claims 1-2, 6-11 and 14 as being anticipated by Negulescu et al. (US 6,214,563). These claims have been cancelled rendering the rejections moot. Moreover, Applicants submit that the rejections would not apply should the Examiner apply them to newly presented claims 18-38.

The references cited by the Examiner fail to teach each aspect of the claimed invention and therefore cannot be held to anticipate the present invention. The present invention describes a method that uses a well-less system for the simultaneous screening of large numbers of test compounds for biological activity and potential therapeutic use. As seen in new claim 18, the test compounds in the present invention are held on a solid support, on a porous membrane or on a non-porous substrate. This allows the present invention to avoid the complications associated with dispensing multiple microvolumes of many different fluids (see page 2, lines 14-17 of the Specification). In contrast, the 96 well format of Sittampalam suggests using pipetting to dispense the test substances (see page 388, column 1, lines 9-11). Isacoff makes no mention of the manner of dispensing the test substances and does not teach a well less system. And, Negulescu fails to teach a well less system and teaches that the chemicals (i.e. test substances) are in solution (see column 17, lines 7-9). Applicants submit that the cited references do not disclose the features of the claimed invention and hence, do not anticipate the present invention. Removal and reconsideration of these rejections is respectfully submitted.

7. Rejections Under 35 USC §103(a)

The Examiner has rejected claims 12-13 and 15-16 under 35 USC §103(a) as being unpatentable over Sittampalam et al. or Negulescu et al. in view of Chelsky et al. (US 5,856,083). These claims have been cancelled rendering the rejection moot. Applicants further submit that the rejection is equally inapplicable to newly presented claims 18-38.

As stated above, the present invention describes a method that uses a well-less system for the simultaneous screening of large numbers of test compounds for biological activity and potential therapeutic use. The present invention allows for the simultaneous detection of the response upon contact of the test compound with the detector layer. The Examiner argues it would have been obvious to one of ordinary skill in the art at the time of the instant invention to incorporate the teaching of Chelsky in holding test compounds in solid support and diffusing them for contact with detector layers comprising cellular components such as taught by Sittampalam and Negulescu. Applicants respectfully disagree.

The Examiner argues that Chelsky teaches that the test compounds are held on porous or non-porous solid **supports**. The solid supports particularly described in Chelsky are beads (see column 2, line 66 to column 3, line 2). The supports in Chelsky consist of beads, each containing a test compound. These beads can be incorporated into a gel (i.e. a colloidal matrix such as agarose), which may contain enzymes (i.e. the detector layer). Chelsky does not teach an array of test compounds held on a single solid support as described in the instant invention. Applicants submit that combining Chelsky with either Sittampalam or Negulescu does not lead to the present invention.

Applicants further submit that there is no motivation to combine Chelsky with either Sittampalam or Negulescu. Applicants would like to point out that Chelsky does not disclose the use of living cells as a sensing layer. And, furthermore that a person skilled in the art would recognize that none of the methods claimed in Chelsky would work with living cells as the sensing layer for reasons based on the requirements to maintain life in a cell monolayer. It should also be noted that Chelsky does not describe a key feature of the present invention -- ringing the sample array into contact with the sensing layer in the field of view of the array detector, such that at least the first part of the measurement is contemporaneous with the contacting event.

The instant invention represents a nonobvious improvement over the prior art. The advantage of the present system allows for multiple copies of the same test array to be produced at one time to be screened against multiple systems for specific activities, which minimizes stock handling from library archives. The present invention also removes the need to dispense micro volumes of test compounds during the period of the assay itself. The references cited by the Examiner, either singly or in combination,

do not render the instant invention obvious. Accordingly, in view of the foregoing, reconsideration and removal of the rejection is requested.

Examination on the merits and favorable action on the claims in accordance with the above are requested.

If the Examiner has any questions concerning this application, he is requested to contact Leonard Svensson (Reg. No.: 30,330) the undersigned at (714) 708-8555.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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